



The Commonwealth of Massachusetts
DEPARTMENT OF
TELECOMMUNICATIONS AND ENERGY

D.T.E. 04-93

Petition of Bay State Gas Company for the recovery of an exogenous cost associated with its demand-side management programs for the period September 1, 2003 to August 31, 2004.

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FOR: BAY STATE GAS COMPANY
Petitioner

I. INTRODUCTION

On October 26, 2004, Bay State Gas Company (“Bay State” or “Company”) petitioned the Department of Telecommunications and Energy (“Department”) to recover lost base revenues (“LBR”) associated with its demand-side management (“DSM”) programs for the twelve-month period ending August 31, 2004. The Company seeks to recover the LBR, with carrying costs, as an exogenous cost adjustment in accordance with the standard established by the Department in Colonial Gas Company, D.T.E. 00-73 (2001).¹ The proposed exogenous cost includes costs incurred from September 1, 2003 through August 31, 2004 for DSM programs installed before 2000. The Department docketed this petition as D.T.E. 04-93.

Pursuant to notice duly issued, the Department held a public hearing on December 16, 2004. The Department held an evidentiary hearing on February 3, 2005. At the evidentiary hearing, Bay State sponsored the testimony of Joseph A. Ferro, manager of regulatory policy for the Company. The evidentiary record consists of fourteen exhibits and three record requests. On February 17, 2005, the Company filed a brief.

II. DESCRIPTION OF PROPOSAL

Bay State seeks to recover \$2,520,341 of LBR as an exogenous cost adjustment due to the change in regulatory policy applied to the Company resulting from Colonial Gas Company, D.T.E. 97-112 (1999) (Exh. BSG-1, Att. G). The Company states that of the \$2,520,341 it seeks, \$1,572,086, including \$51,673 in carrying costs, is from residential DSM programs,

¹ The Department has defined exogenous costs as positive or negative cost changes beyond a company’s control that would significantly affect the company’s operations. Eastern/Colonial Acquisition, D.T.E. 98-128, at 54 (1999).

and \$948,255, including \$31,382 in carrying costs, is from commercial and industrial (“C&I”) programs (Exh. BSG-1, Att. G).²

The Company seeks to recover only for its LBR associated with DSM programs installed through February 2000 (Exh. BSG-1, at 5). The Company proposes to collect the exogenous cost amount through the Company’s Local Distribution Adjustment Factor (“LDAF”) upon approval by the Department (Tr. at 17-18).³

To determine the total LBR amount to be recovered as an exogenous cost, Bay State first calculated by month and by customer class, the total energy savings per DSM program and the associated carrying costs based on the method approved by the Department in Bay State Gas Company, D.T.E. 01-27 (2001); Bay State Gas Company, D.P.U. 96-98 (1997); and Bay State Gas Company, D.P.U. 96-76 (1996) (Exh. BSG-A, Att. F). The total energy savings per DSM program calculation was based on the method approved by the Department in Bay State Gas Company, D.P.U. 96-76 (1996); Bay State Gas Company, D.P.U. 96-98 (1997); and Bay State Gas Company, D.T.E. 01-27 (2001). Next, the Company multiplied the energy savings by the applicable net revenue rates to arrive at the LBR amount (Exh. BSG-1, Att. F). Finally, the Company applied the appropriate carrying cost charges to the LBR amount to calculate the total LBR (id.).

² Carrying costs are derived by applying the Company’s pretax cost of capital, approved by the Department in Bay State Gas Company, D.T.E. 92-111 (1992), to the un-recovered balances prior to implementing the LBR recovery rate.

³ The Company has included recovery of the \$2,520,341 exogenous cost amount in its May 2005 LDAF.

III. LBR RECOVERY

A. Introduction

In D.T.E. 97-112, at 32-33, the Department modified its LBR policy for all local gas distribution companies by limiting LBR recovery to a period equal to the average historic time span between the last four rate cases for each company (“Rolling Period Method” or “RPM”).⁴ In Eastern/Colonial Acquisition, D.T.E. 98-128, at 55, the Department recognized that, when the RPM policy change had cost consequences for Colonial, it would meet the definition of an “exogenous cost” for recovery purposes.

In its petition, Bay State claims that it has LBR due to the change in regulatory policy applied to the Company resulting from D.T.E. 97-112 (Exh. BSG-1, at 4, 7-8). Consistent with our precedent, we shall examine the Company’s calculation of its LBR prior to determining whether it may recover that amount as an exogenous cost. See, e.g., Colonial Gas Company, D.T.E. 03-90, at 3 (2004); Colonial Gas Company, D.T.E. 02-58, at 15-16(2003); Colonial Gas Company, D.T.E. 01-73, at 17 (2002); D.T.E. 00-73, at 21; D.T.E. 98-128, at 55. To do this, we review the Company’s savings estimates (which, when multiplied by the Company’s base rates, result in the LBR) and, necessarily, the impact evaluations on which the savings estimates are based.

⁴ Previously, LBR for DSM programs installed since a company’s last rate case were recoverable over the lives of the programs installed. D.P.U. 97-112, at 9-11.

B. Standard of Review for Energy Savings Estimates

In evaluating savings estimates for gas DSM programs, the Department draws on its experience with electric DSM programs. D.P.U. 96-98, at 1. The Department has found that many estimates of savings that are not actually measured have been biased upwards substantially and have therefore required companies to measure savings using impact evaluations.⁵ See Massachusetts Electric Company, D.P.U. 92-217-B at 4-5 (1994). The Department has identified and approved a wide variety of techniques for evaluating savings estimates. Id. at 7-16, 35-38, 47-51, 68-74. Recognizing that obtaining more precise savings estimates has a cost, the Department directed companies to seek increased precision where the marginal value of more precise estimates exceeds the marginal cost of obtaining the additional precision. Id. at 5.

In order for a company's DSM savings estimates to be accepted, the company must demonstrate that its impact evaluations are reviewable, appropriate, and reliable. D.P.U. 96-98, at 2, citing D.P.U. 92-217-B at 4-7. An impact evaluation is considered reviewable if it is complete, clearly presented, and contains a summary that sufficiently explains all assumptions and data presented. D.P.U. 92-217-B at 4-6. An impact evaluation is considered appropriate if evaluation techniques selected are reasonable given the characteristics of a particular DSM program, the company's resources, and the available methods for determining demand and energy savings estimates. Id. at 6-7. Finally, an impact evaluation is

⁵ Impact evaluations use quantitative analyses to assess energy and capacity savings resulting from the implementation of DSM programs. D.P.U. 92-217-B at 1, n.1.

considered reliable if the savings estimates included in the evaluation are unbiased and are measured to a sufficient level of precision, given the characteristics of a particular DSM program, the company's resources, and the available methods for determining demand and energy savings estimates. Id. at 7. In Boston Gas Company, D.P.U. 94-15, at 52-54 (1995), the Department ordered local distribution companies, when petitioning for the recovery of LBR and incentives from DSM programs, to develop energy savings estimates for their residential and multifamily programs using the Gas Evaluation and Monitoring Study ("GEMS") method,⁶ subject to certain conditions.

C. Calculation of Energy Savings Estimates and LBR

1. Introduction

Prior to D.T.E. 97-112, the Department allowed local distribution companies to include in the calculation of total energy savings and LBR all DSM programs installed by them since the inception of their DSM programs. In D.T.E. 97-112, the Department changed its policy and required companies to use the RPM to calculate energy savings and LBR.

D.T.E. 97-112, at 33. Therefore, to calculate the exogenous cost arising from the Department's change in policy in the method of calculating LBR, Bay State includes all

⁶ GEMS was a comprehensive research project that used a variety of analytical tools to evaluate the effectiveness of residential and multi-family natural gas DSM programs. D.P.U. 94-15, at 1, n.1. The "GEMS method" refers to the overall analytical framework established to: (1) determine the effectiveness of the company's residential DSM programs by estimating the amount of gross energy saved from a sample of its residential customers; (2) transfer these results to the company's residential DSM and non-host local distribution companies' DSM programs; and (3) adjust gross savings to account for factors that affect net program savings. Id. at 1, n.2.

residential and C&I DSM programs installed by the Company since the inception of its DSM programs up to, and including, February 2000 (Exh. BSG-1, at 8).

Bay State requests the recovery of \$2,520,341 as an exogenous cost (including carrying costs) associated with its residential and C&I DSM programs (Exh. BSG-1, Att. G). In the following subsections, we examine Bay State's DSM savings and LBR by customer class.

2. Energy Savings Estimates Calculation

a. Description

To calculate monthly therm savings for each type of DSM measure installed, the Company used engineering benchmarks and energy audits performed by its energy auditing vendors (Exh. DTE 1-8). For each type of measure installed, Bay State performed a monthly LBR calculation (Exh. BSG-1, Att. F). First, annual weather normalized therms saved are computed by multiplying the realization rates times the theoretical therms saved (id.). Next, Bay State adjusted this calculation to account for the value of measures that persist in the field, but which are beyond their initially estimated useful lives (expired measures) to derive the annual savings of surviving conservation measures (id.; Exh. DTE 1-4). For heating measures, the monthly actual therms saved are determined by multiplying annual savings by the ratio of the actual effective degree days for the given month divided by the normal degree days for the year (Exh. BSG-1, Att. F). For non-heating measures, the annual savings are multiplied by one-twelfth to determine the monthly savings (id.). These results are accumulated by month and then multiplied by the weighted average incremental net revenue

rates for the rate class for the given month (id.). All measures are then summed to produce the total lost base revenue for all measures for the given month (id.).

Bay State proposed to recover a carrying cost on the monthly balance of LBR (Exh. BSG-1, Att. F). Actual LBR incurred are tabulated monthly in order to compute carrying costs on the average monthly balance of yet-to-be recovered LBR (Exh. BSG-1, Att. D).

b. Residential Programs

Bay State estimates a net energy savings of 3,207,805 Mcf from its residential heating, non-heating and multi-family DSM programs for the period September 2003 through August 2004 (Exh. BSG-1, Att. H). The Company applied the energy savings estimates as inputs into the calculation of the LBR (id.). Based upon this calculation, the Company requests the recovery of \$1,520,413 in LBR, and \$51,673 in carrying costs, for a total of \$1,572,086 as an exogenous cost associated with its residential DSM programs for the period September 2003 through August 2004 (Exh. BSG-1, Att. G).

c. C&I Programs

Bay State states that it calculated a total net Mcf savings of 3,506,429 Mcf for its C&I programs for the period September 2003 through August 2004 (Exh. BSG-1, Att. H). The Company used the energy savings estimates as inputs into the calculation of LBR. Based upon these estimates, Bay State's requests the recovery of \$916,873 in LBR, and \$31,382 in carrying costs, for a total of \$948,255 as an exogenous cost associated with its C&I programs for the period September 2003 through August 2004 (Exh. BSG-1, Att. G).

d. Analysis and Findings

The Department has reviewed the Company's estimates of energy savings and LBR calculation associated with its residential and C&I programs. The Company's impact evaluations for both residential and C&I programs are complete and clearly presented, with all data and assumptions sufficiently explained. Accordingly, the Department finds that the Company's impact evaluations for its residential and C&I programs are reviewable. The Department also notes that in this proceeding Bay State used the same evaluation methods to calculate total energy savings, LBR, and associated carrying costs for its residential and C&I programs that were approved in Bay State Gas Company, D.T.E. 03-36, at 15-16 (2004). Thus, the Department finds that the estimates are reliable and that the Company has correctly calculated the LBR amount associated with the residential and the C&I programs. Furthermore, the Department finds that the evaluation techniques that Bay State uses to estimate energy savings for its residential and C&I programs are reasonable and are consistent with previous Department Orders. See Bay State Gas Company, D.T.E. 04-57 (2005); D.T.E. 03-90; D.T.E. 03-36. Therefore, we find that the Company's impact evaluations and savings estimates for its residential and C&I programs are appropriate.

IV. EXOGENOUS COST ADJUSTMENT

A. Introduction

Having determined that Bay State correctly calculated its LBR for the twelve-month period ending August 2004, we now address whether the LBR amount may be recovered as an

exogenous cost. Specifically, we review the Company's position and our standard for exogenous cost recovery.

B. Company Proposal

Bay State seeks to recover \$2,520,341 through its LDAF as an exogenous cost pursuant to D.T.E. 98-128, at 55 (Exh. BSG-1, Att. G). The \$2,520,341 is comprised of \$1,572,086 in LBR inclusive of carrying costs associated with its residential DSM programs (including the Multi-family programs), and \$948,255 in LBR inclusive of carrying costs associated with its C&I DSM programs (id.).

The Company claims that the Department should grant LBR recovery of \$2,520,341, because such recovery satisfies the Department's standard for the recovery of exogenous costs, and is consistent with Department precedent (Exh.BSG-1, at 7, citing D.T.E. 03-36, at 12-13; D.T.E. 02-58, at 15-16; D.T.E. 01-73 at 17; D.T.E. 00-73, at 21; NIPSCO-Bay State Acquisition, D.T.E. 98-31 (1998)). Bay State notes that in previous proceedings, the Department found that a change in the Department's LBR policy that had cost consequences could fall within the definition of exogenous costs, and that the Department established an exogenous cost qualifying threshold of \$500,000 for Bay State in D.T.E. 98-31 (Exh. BSG-1, at 4, 7-8, citing Bay State Gas Company, D.T.E. 03-36 at 12, 15 (2004); NIPSCO-Bay State Acquisition, D.T.E. 98-31, at 18 (1998)). The Company argues, therefore, that it has satisfied the Department's conditions for the recovery of exogenous costs associated with its DSM program because: (1) the Company has incurred a cost consequence as a direct result of the Department's policy change in LBR calculation in D.T.E. 97-112; (2) the exogenous cost of

\$2,520,341 is greater than the established threshold of \$500,000 to qualify for recovery; and (3) the Company's earnings independent of recovering the proposed exogenous costs are reasonable (Exh. BSG-1, at 4, 8; Tr. 11-12). Bay State states that its 2003 and 2004 returns on equity ("ROE") were 10.19 percent and 9.30 percent, respectively (RR-DTE-1-2-A; RR-DTE-1-2-B).⁷ Bay State contends that the Company's 2003 and 2004 ROE are: (1) lower than the ROE allowed by the Department for LDCs in recently litigated cases (Exh. BSG-1, at 9, citing Boston Gas Company, D.T.E. 03-40, at 364 (2003));⁸ and (2) lower than Bay State's last approved ROE of 11.40 percent and the overall weighted cost of capital of 10.35 percent approved in the Company's last general rate case in Bay State Gas Company, D.P.U. 92-111 (1992) (Exh. BSG-1, at 8-9). Bay State argues that failure to allow the Company to recover the proposed exogenous cost would deny it the opportunity to earn its allowed rate of return (Exh. DTE 1-13).

C. Standard of Review

The Department has defined exogenous costs as positive or negative cost changes beyond a company's control that would significantly affect the company's operations. D.T.E. 98-128, at 54; D.T.E. 98-31, at 17; D.T.E. 98-27, at 19 (1998). Included in that

⁷ Bay State's calculation of the 10.19 percent ROE for 2003 and 9.30 percent ROE for 2004 includes the recovery of the proposed exogenous cost of \$2,520,341. Without the recovery of the proposed exogenous cost, Bay State's ROE for 2003 and 2004 would have been 9.50 percent and 8.65 percent, respectively (RR-DTE-1-1-A; RR-DTE-1-2-B).

⁸ The Department approved an ROE of 10.2 percent for Boston Gas Company. Boston Gas Company, D.T.E. 03-40, at 363 (2003).

definition are cost changes resulting from changes in tax laws that uniquely affect the local gas distribution industry; accounting changes unique to the local gas distribution industry; and regulatory, judicial, or legislative changes uniquely affecting the local gas distribution industry. D.T.E. 98-27, at 19; Boston Gas Company, D.P.U. 96-50 (Phase I) at 292 (1996). In D.T.E. 98-128, at 55, the Department recognized that a change in our regulatory policy that had cost consequences, including our LBR policy, could fall within our definition of exogenous cost.

To avoid costly regulatory processes over minimal adjustments, however, the Department requires cost changes to meet a minimum threshold, based on the company's operating revenues, before the company may propose recovery of an exogenous cost. Id.; D.T.E. 98-31, at 18; D.P.U. 96-50 (Phase I) at 293. The Department established thresholds on a company-specific basis to reflect a "principle of proportionality" in relation to the company's operating revenues. D.T.E. 98-128, at 55-56. The Department determined that any individual exogenous cost must exceed the company's threshold in a particular year in order for the petitioners to request recovery of that particular exogenous cost increase. Id.; D.T.E. 98-31, at 18; D.P.U. 96-50 (Phase I) at 293. In Bay State's case, the Department established a minimum threshold of \$500,000. D.T.E. 98-31, at 18.

To recover exogenous costs during a rate plan, petitioners must propose exogenous cost adjustments, with supporting documentation and rationale, as to the appropriateness of recovery of the proposed exogenous costs. D.T.E. 98-128 at 55; D.T.E. 98-31, at 17-18. The Department also has indicated that the earnings of the company will be a factor in

considering whether to approve a request for recovery of an exogenous cost. D.T.E. 02-58, at 15-17; D.T.E. 01-73, at 17-18; D.T.E. 00-73, at 21.

Therefore, a proposal for an exogenous cost adjustment must meet a three-part test. Proponents of an exogenous cost adjustment bear the burden of demonstrating: (1) that the cost change is of a type that is external to the company and is beyond the company's control; (2) that the magnitude of the cost change exceeds the company's exogenous cost threshold; and (3) that the company's earnings, independent of recovering a proposed exogenous cost, are reasonable. See, e.g., D.T.E. 00-73, at 21.

D. Analysis and Findings

We now apply the three-part test. Regarding the first element, the Company's request to recover \$2,437,286 of LBR as an exogenous cost (plus carrying costs of \$83,055) represents the annual impact of the Department's change in regulatory policy in D.T.E. 97-112. In D.T.E. 98-128, at 55, the Department found that an LBR policy change meets the definition of an exogenous cost. See, also, D.T.E. 03-36 at 12 (2003). Therefore, we find that the Company's present request meets the requirement for the first element.

Regarding the second element, the Department has established a monetary threshold for exogenous cost recovery of \$500,000 for Bay State. See D.T.E. 98-31, at 18. Bay State correctly calculated the cost impact of the change in regulatory policy to be \$2,437,286 (plus carrying costs of \$83,055). Therefore, we find that the cost change exceeds the Company's minimum threshold, and Bay State has met the requirement for the second element.

Regarding the third element, we review whether the Company's earnings, independent of exogenous cost recovery, were reasonable. Bay State's 2003 weather-normalized ROE including the exogenous costs recovery was 10.19 percent (Exh. BSG-1, Att. A at 1), and its 2004 weather-normalized ROE was 9.30 percent (Exh. DTE 1-2, (Supp.) Att. DTE 1-2(a)). This return is lower than the ROE allowed by the Department for LDCs in the most recently litigated rate cases. See, e.g., Boston Gas Company, D.T.E. 03-40, at 364 (2003); Fitchburg Gas and Electric Light Company, D.T.E. 02-24/25, at 230 (2003); D.T.E. 01-56, at 119. The Department finds that the level of Bay State's earnings in 2004 was reasonable, and the Company has met the third element.

We, therefore, find that Bay State has met the requirements of our standard to recover exogenous costs. Accordingly, the Department allows Bay State's request to recover the LBR as an exogenous cost in this case.

V. ORDER

Accordingly, after due notice, hearing, and consideration, it is

ORDERED: That the savings estimates and LBR for Bay State's DSM programs for the period September 2003 through August 2004 are hereby approved; and it is

FURTHER ORDERED: That the Company may recover total lost-base revenues of \$2,520,341, which includes carrying costs, associated with its demand-side management programs for the period September 2003 through August 2004, per Table I attached to this Order.

By Order of the Department,

/s/
Paul G. Afonso, Chairman

/s/
James Connelly, Commissioner

/s/
W. Robert Keating, Commissioner

/s/
Judith F. Judson, Commissioner

TABLE I

Lost Base Revenue Cost Breakdowns

Customer Class	LBR to be Recovered As Exogenous Cost	Associated Carrying Costs to be Recovered As Exogenous Cost	Total LBR to be Recovered As Exogenous Cost
Residential	\$1,520,413	\$51,673	\$1,572,086
Commercial & Industrial	\$916,873	\$31,382	\$948,255
Total	\$2,437,286	\$83,055	\$2,520,341

An appeal as to matters of law from any final decision, order or ruling of the Commission may be taken to the Supreme Judicial Court by an aggrieved party in interest by the filing of a written petition praying that the Order of the Commission be modified or set aside in whole or in part. Such petition for appeal shall be filed with the Secretary of the Commission within twenty days after the date of service of the decision, order or ruling of the Commission, or within such further time as the Commission may allow upon request filed prior to the expiration of the twenty days after the date of service of said decision, order or ruling. Within ten days after such petition has been filed, the appealing party shall enter the appeal in the Supreme Judicial Court sitting in Suffolk County by filing a copy thereof with the Clerk of said Court. G.L. c. 25, § 5.